

## Human PLSCR1

```

1  cgagcgccag  cgcgggaacc  gggaaaagga  aaccgtgttg  tgtacgtaag  attcaggaaa
61  cgaaaccagg  agccgcgggt  gttggcgcaa  aggttactcc  cagacccttt  tccggctgac
121  ttctgagaag  gttgcgcagc  agctgtgccc  gacagtctag  aggcgcagaa  gaggaagcca
181  tcgcctggcc  ccggtctctc  ggaccttgtc  tcgctcgggg  gcggaaacag  cggcagccag
241  agaactgttt  taatcatgga  caaacaaaac  tcacagatga  atgcttctca  cccggaaaca
301  aacttgccag  ttgggtatcc  tcctcagtat  ccaccgacag  cattccaagg  acctccagga
361  tatagtggct  accctgggccc  ccaggtcagc  taccaccccc  caccagccgg  ccattcaggt
421  cctggcccag  ctggctttcc  tgtcccaaat  cagccagtgt  ataatcagcc  agtatataat
481  cagccagtgt  gagctgcagg  ggtaccatgg  atgccagcgc  cacagcctcc  attaaactgt
541  ccacctggat  tagaatatth  aagtcagata  gatcagatac  tgattcatca  gcaaattgaa
601  cttctggaag  ttttaacagg  ttttgaaact  aataacaaat  atgaaattaa  gaacagcttt
661  ggacagaggg  tttactttgc  agcgggaagat  actgattgct  gtacccgaaa  ttgctgtggg
721  ccactctagac  cttttacctt  gaggattatt  gataatatgg  gtcaagaagt  cataactctg
781  gagagaccac  taagatgtag  cagctgttgt  tgtccctgct  gccttcagga  gatagaaatc
841  caagctcctc  ctggtgtacc  aataggttat  gttattcaga  cttggcacc  atgtctacca
901  aagtttacia  ttcaaaatga  gaaaagagag  gatgtactaa  aaataagtgg  tccatgtgtt
961  gtgtgcagct  gttgtggaga  tgttgatttt  gagattaaat  ctcttgatga  acagtgtgtg
1021  gttggcaaaa  tttccaagca  ctggactgga  attttgagag  aggcatttac  agacgctgat
1081  aactttggaa  tccagttccc  tttagacctt  gatgttaaaa  tgaaagctgt  aatgattggg
1141  gcctgtttcc  tcattgactt  catgtttttt  gaaagcactg  gcagccagga  acaaaaatca
1201  ggagtgtggg  agtggattag  tgaaagtctc  ctgaggaaat  ctgaagtctg  tatattgatt
1261  gagactatct  aaactcatac  ctgtatgaat  taagctgtaa  ggctgtagc  tctggttgta
1321  tacttttgc  tttcaaatta  tagtttatct  tctgtataac  tgatttataa  aggtttttgt
1381  acatttttta  atactcattg  tcaatttgag  aaaaaggaca  tatgagtttt  tgcattttat
1441  aatgaaactt  cctttgaaaa  actgctttga  attatgatct  ctgattcatt  gtccatttta
1501  ctaccaaata  ttaactaagg  ccttattaat  ttttatataa  attatatctt  gtccatttaa
1561  atctagttac  aattttattc  atgcataaga  gctaattgta  ttttgcaaat  gccatatatt
1621  caaaaaagct  caaagataat  tttctttact  attatgttca  aataatatcc  aatatgcata
1681  ttatctttta  aaagttaaat  gtttttttaa  tcttcaagaa  atcatgttac  acttaacttc
1741  tctagaagc  taatctatac  cataatattt  tcatattcac  aagatattaa  attaccaatt

1801  ttcaaattat  tgtagtaaa  gaacaaaatg  attctctccc  aaagaaagac  acattttaaa
1861  tactccttca  ctctaaaact  ctggtattat  aacttttgaa  agttaatatt  tctacatgaa
1921  atgttttagct  cttacactct  atccttccca  gaaaatggta  attgagatta  ctcatatatt
1981  aattaaatac  aatatcatat  atatattcac  agagtataaa  cctaaataat  gatctattag
2041  attcaaatat  ttgaaataaa  aacttgattt  ttttgt

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Predicted open reading frame:

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MDKQNSQMNASHPETNLPVGYPYPPPTAFQGPYSGYPGPQVSYPFPPAGHSGPGPAG
FPVPNPQPVYNQPVYNQPVGAAGVPWMPAPQPPLNCPGLELYLSQIDQILHQIELLEVL
TGFETNNKYEIKNSFGQRVYFAAEDTDCCTRNCCGPSRPFTLRIIDNMGQEVITLERPLR
CSSCCCPCLQEIEIQAPPGVPIGYVIQTWHPCLPKFTIQNEKREDVLKISGPCVVCSCC
GDVDFEIKSLDEQCQVVGKISKHWTGILREAFDADNFGIQFPLDLVVKMAVMIGACFLI
DFMFFESTGSQEQKSGVW

```

FIGURE 1

## Human PLSCR2

```

1 ggccgaatgg agaatgaagc cttttcaaat tcacctccca gtgaaccacc ctcaaaatag
61 aagtgaatgt gaaaccacag atatttcatt aaaacatata tgaagataaa aacataacctc
121 aagcttcaca gatataggac ttctgagctg agaggacctc ccggacatat tgtctaccct
181 aagcaccagg ctggacacac tgggaacacag gctgaccacc tgggctccca ggccttctac
241 ccaggacgtc agcatgacta cctagtccca cctgctggca cagctggcat tcctgttcaa
301 aatcagccag gtagacctga aggggtacca tggatgccag caccaccacc accattaaac
361 tgtccgccag gattggaata ctttaagtcag atagatatga tactaattca tcagcaaatt
421 gaacttctgg aagttctatt cagttttgaa agtagtaaca tgtatgaaat caagaacagc
481 tttgggcaga ggatttattt tgcagcagaa gatactaatt tctgtatccg aaattgctgt
541 gggcggtcta gaccttttac cttgaggatt actgataatg tgggtcgaga agtcataact
601 ctggaaagac cactaagatg taactgttgt tgttgcctct gctgccttca ggagatagaa
661 atccaagctc ctctgggtgt accagtaggt tatgttactc agacctggca cccatgtcta
721 acaaagttta caattaaaaa tcagaaaaga gaggatgtac taaaaattag tgggtccatgt
781 atcgtgtgca gctgtattgc ggggtgttgat tttgagatta catctcttga tgaacaaatt
841 gtggttggca ggatttctaa gcactggtct gggtttttaa gagaggcatt tactgatgct
901 gacaactttg gaatccaatt ccctagagac cttgatgtta aaatgaaagc cgtgatgatt
961 ggtgcctggt tcctcattga ctacatgttt tttgaaagaa ctaggtaatg actggaatgt
1021 cagagtgtgg gagtggatta atgattccgg atctttggct aggcaaaatg aaactataac
1081 tgatctaaac ggttccttcc ttcttctact gtgcaaggaa gatgtaagga aaaactcgca
1141 cactatctgt ggaactcatt taaattcaaa tctagataa acatttcgca ttgaatatTT
1201 acatggagaa aaatcatcaa acatcaacaa ttatcaagtt aattaataaa aatactaggt
1261 attgc

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Predicted open reading frame:

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MPAPPPPLNCPGLEYLSQIDMILIHQQIELLEVLFSFESSNMYEIKNSFGQRIYFAED
TNFCIRNCCGRSRPFTLRITDNVGREVITLERPLRCNCCCPCCLQEIEIQAPPGVPVGY
VTQTHPCLTKFTIKNQKREDVLKISGPCIVCSCIAGVDFEITSLDEQIVVGRISKHWSG
FLREAF TDADNFGIQFPRDL DVKMKAVMIGACFLIDYMF FERTR

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**FIGURE 2**

## Human PLSCR3

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1  cggggccggg  gtccgagctc  gggcccgcct  ccgcctccgc  cagctcctgt  gagctgccga
61  gtgctaggea  cccgggctct  tctgggggct  ccagaactaa  gccaccaga  caccatcatc
121  tcgaaaaccc  cagcccttct  cccatggcag  gctacttgcc  ccccaaaggc  tacgcccctt
181  cgccccacc  tccctaccct  gtcacccctg  ggtacccgga  gccggcgcta  catcctgggc
241  cggggcaggc  gccagtgcc  gcccaggtag  ctgccccagc  tcccggcttc  gccctcttcc
301  cctcgccctg  ccccgctggc  ttggggctct  ctgccccctt  cttgccactg  ccaggggtgc
361  cttctggcct  cgaattcctg  gtgcagattg  atcagatttt  gattcaccag  aaggetgagc
421  gagtggaac  gtccctaggc  tgggagacct  gtaatcggtg  tgaactgcgc  tctggggccg
481  ggcagccct  gggtcaggcg  gccgaggaga  gcaactgctg  cgcccgctcg  tctgtggcg
541  cccgccggcc  gctgcgtgtc  cgccctggcg  accccgggga  ccgtgagggt  ctgcgtttgc
601  tccgcccgct  gactgtggc  tgcagctgct  gccctgtgg  cctccaggag  atggaagtac
661  aggctccacc  aggcaccacc  attggccacg  tgctacagac  ctggcatccc  ttctcccca
721  agttctccat  ccaggatgcc  gatcgccaga  cagtcttgcg  agtgggtggg  cctgtctgga
781  cctgtggctg  tggcacagac  accaactttg  aggtgaagac  tcgggatgaa  tcccgcagtg
841  tgggcgcgat  cagcaagcag  tgggggggct  tgggtccgaga  agccctcaca  gatgcagatg
901  actttggcct  acagttcccg  ctggacctgg  atgtgagggt  gaaggctgtg  ctgctgggag
961  ccacattcct  cattgactac  atgttctttg  agaagcgagg  aggcgtggg  cctctgccca
1021  tcaccagtta  gaggccacca  tgggtgtgagg  agaccatcac  ctgcaccaga  actccagatg
1081  gtcacctgcc  ctggcccttc  ctctgggcag  cccctttcct  ccattgtacac  tgcaggggac
1141  agaagggggg  ccccatccct  accctactcc  ctggccgcct  gccctgtgg  ttcccaagga
1201  ggggtatgta  tgagagccgc  tctcctgcta  cctcccacca  ctgtcccagc  agtccctcgg
1261  cacacaggca  tatcagcttt  cacactttcc  ccattgcactc  tctcccacc  ccttccaggg
1321  cctctgctcc  aaaggaggcc  tctggaaccc  aggactctgg  ggttttataa  gagggctggg
1381  gtgtggaagg  gcaagctgca  ccaaagacgg  tggatatagc  caccgcccc  ccgccgctgc
1441  ctagcatctg  cttggccaat  tagttcagcc  tcagaccatg  gcactttgag  ggggtctcta
1501  cctccccatc  aacagctgca  gggggacccc  agtgccaaact  tctctccca  ctagggccct
1561  gccttcagct  ggtgcttget  gcgattcctg  tgccttatgt  aactgccctt  ccttcccttg
1621  ccctaggaaa  aaggetgcat  ctttatatgt  tacattcata  taaactttgt  aactttttgg

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Predicted open reading frame:

```

MAGYLPKGYAPSPPPYPVTPGYPEPALHPGPGQAPVPAQVPAPAPGFALFSPGPVAL
GSAAPFLPLPGVPSGLEFLVQIDQILIHQKAERVETFLGWETCNRYELRSGAGQPLGQAA
EESNCCARLCCGARRPLRVRLADPGDREVLRLRLPLHCGSCCCPCGLQEMEVQAPPGTII
GHVLQTHWPFPLPKFSIQDADRQTVLRVVGPCWTCGCGTDTNFEVKTRDESRSVGRISKQW
GGLVREALTDADDFGLQFPLDLDRVKAVLLGATFLIDYMFEEKRGAGPSAITS

```

FIGURE 3

# Human PLSCR4

```

1  gtttataact tgaaaaatcc tctccgtctc ccttccctgc ctcctttcct ttccttttcc
61  tctgccagta caactagacc cggcgctctg cgtccccggt gccagcatt ctgcggggca
121 ggcggtattaa ttggaattct tcaaaatgtc aggtgtggta cccacagccc ctgaacagcc
181 tgcaggtgaa atggaaaatc aaacaaaacc accagatcca aggctgatg ctcctctga
241 atacagttct cattttttac caggacccc tggaacagct gtccctccac ctactggcta
301 cccaggaggc ttgcctatgg gatactacag tccacagcaa cccagtacct tccctttgta
361 ccagccagtt ggtggtatcc atcctgtccg gtatcagcct ggcaaatac ctatgccaaa
421 tcagtctggt ccaataacat ggatgccagg gccaaactcct atggcaaact gccctctgg
481 tctggaatac ttagttcagt tggacaacat acatgttctt cagcattttg agcctctgga
541 aatgatgaca tgttttgaaa ctaataatag atatgatatt aaaaacaact cagaccagat
601 ggtttacggt gtaaccgaag acacagatga ctttaccagg aatgcctatc ggacactaag
661 gccctctgct ctcgggtca ctgattgtat gggccgagaa atcatgacaa tgcagagacc
721 cttcagatgc acctgctggt gcttctggtg cccctctgcc agacaagagc tggaggtgca
781 gtgtcctcct ggtgtcacca ttggctttgt tgcggaacat tggaaacctg gcagggcggt
841 gtacagcatc caaaatgaga agaaagaaaa tgtgatgaga gttcgtgggc catgctcaac
901 ctatggctgt ggttcagatt ctgtttttga ggtcaaacc cttgatggca tatccaacat
961 cggcagtatt atccggaagt ggaatggttt gttatcagca atggcagatg ctgaccattt
1021 tgacattcac tccccactag acctggatgt gaagatgaaa gccatgattt ttggagcttg
1081 cttcctcatt gacttcatgt attttgaaag atctccacca caacgttcaa gatagagaga
1141 cacagcaagc catcaactat ggttaatttt gaaaaatgga aaagttggat tgggcttaca
1201 gtcagcactc agttatttgc aagtgtattt ctttgctttg tagagtattt ttattgggtg
1261 ttaactttga cagctgagag tgggcttgca agaacacaat ctaaaagtggt gtttcaattg
1321 agtatctctc tagtagaata ggagttcatc ctgaaaagct gtgactcatt aaccagtaa
1381 acatatacaa agtaagctta aaacactata aacatgagat aagggaaaaa gaatccagag
1441 ttctcatatt aataggtagt gaaacaataa ggctttttag agcagacttt gttggcataa
1501 aataacctgg cttctatccc taaccttttc ctacctttcc tctccgtcaa catgtcctca
1561 tactgaagac aaacttggtt caatgatagt cttcattttt aaaaaacaaa aggcaggcag
1621 acagaaataa tgatgttttc ttgcactaag aaggtactac ttgtacacat atatcaaac
1681 ctcattctgc aaagtttttg aaggtttcaa tgggaaattt gattttatta caaaataaaa
1741 cattttttta tgttaaagtt tatatatccc atgcttgttt tctcattcac tggcatggat
1801 gatcaggagc tgcctatata tgaaggcaga atcagactat caggaaagga gctggccagg
1861 gccacagcca gtcaagatct ctgagcaact tagagacatt ggtgtcatta tatgaagctt
1921 gcatttaata catttataca taatacattt gtacatttaa ttcataacgt ctcttggtca
1981 cagatgcctt atatataaaa taagttgcca gatctctaag attgcctagt acacctttgt
2041 atctcatttg atgtgatacc cagaagagat cattgttttt tgtttttgtt tttgtttttt
2101 tcaagaagat ccttcgtgat caccatgctg ttctcatggg aagaactgga gttatgtttt
2161 taaatttgaa aatatgacat tttatgtagc actatataaa aagtgaagc gacaaattcc
2221 accgctgctt aatactgctt tgcttctttt tattgacatg atagatacat atgtatctac
2281 acagagtaat aataataaaa cacagtaaac attctatttc tctatggtct acagcatgcc
2341 agtaaataat atgtaggacc aataataaat tatcaattac acatttttgt gttaactaat
2401 taaaagcata gtgtataagt gagtacactc taattaactt gcttctgttg cacttttagtt
2461 ttctacctgc atatggactg catttttttt ttaacacag tcagtatgta gaatgggatg
2521 tattcttctg ctgctgctta ttaaataaag aaagcctgag tgttcttaga tgggggttatt
2581 ctgagatgag ggtcttagcc tacagttctt ttgaaatga aaggtgcttt gttttttaat
2641 tatattcatc ttttcagggt aaatttggtt ttctgagttt ctcgtaatgc tcatttttac
2701 atgctgctac tagctttttt ttttaaaaaa agtaaaagtt gctgctttct aaaatattaa
2761 ttgccttata tttgaaagtg ccattgcaat cgtaagtaga ctatgtattt cctataatga
2821 tgtctgatat ttaaatagga aatcagacaa acaatattca gaaagttaa gcatataaac
2881 tttttttttt taacttgctt agatccctgt attccaaaac ctgctgcac ataataaata
2941 tatctatata tatttagcat aagacgtgat atttttaatt tcttttttaa aaaattatat
3001 ttgtctctta gagttaaaat tttctttata taatattgtc atatgtcata gttttaatac
3061 aattcacatg atttctatgt ttcttaatga tattttgttg tgtaaaattg atcggattga
3121 ttaaaaaaca aattctctgg aatttggtgc ttcatgcttt ttcgtattct ttatggcttt
3181 taaataaata tacaatgggt aatagt

```

FIGURE 4A

Predicted open reading frame:

MSGVVPTAPEQPAGEMENQTKPPDPRPDAPPEYSSHFLPGPPGTAVPPPTGYPGGLPMGY  
YSPQQPSTFFPLYQPVGGIHPVRYQPGKYPMPNQSVPI TWMPGPTPMANCPPGLEYLVLQLD  
NIHVLQHFEPLEMMTCFETNNRYDIKNNSDQM VYVVTEDTDDFTRNAYRTL RPFVLRVTD  
CMGREIMTMQRPFRCTCCC FCCPSARQEELEVQCPPGVTIGFVAEHWNL CRAVYSIQNEKK  
ENVMRVRGPCSTYGCSDSVFEVKS LDGISNIGSIIRKWNGLLSAMADADHFDIHFPLDL  
DVKMKAMIFGACFLIDFMYFERSPPQRSR

FIGURE 4B

## Mouse PLSCR1

```

1  gggcagagct  cgcgtcattc  agagtgagtc  ccctctgcga  gggaaagccg  ggctactgca
61  gcgccaccag  caagggattg  ggactcacgg  acttcagaac  agaaggagcc  tcagaaactg
121  tttaaatcat  ggaaaaccac  agcaagcaaa  ctgaggctcc  ccacccggga  acatatatgc
181  cagctgggta  tccccctccg  tatccaccag  cagctttcca  aggaccttca  gaccatgctg
241  cttaccccat  accccagget  ggctaccaag  ggccctccgg  cccctatcca  gggccccaac
301  ctggctaccc  agtcccacca  ggaggttatg  cagggtggtg  ccctagtggc  tttcctgtcc
361  aaaatcagcc  agcatataat  catccagggt  ggccctgggg  gaccccatgg  atgccagccc
421  cccctcctcc  actgaactgt  ccaccggggc  tggaatactt  agctcagatt  gatcagcttc
481  tggttcatca  gcaaattgag  cttctggaag  tcttaacagg  ctttgaaaca  aataacaaat
541  atgaaatcaa  gaacagcctc  gggcagagag  tttactttgc  agtggaagat  actgactgct
601  gtacccgaaa  ctgctgtggg  gcgtctagac  ctttcacctt  gaggatcctg  gataatctgg
661  gccgagaagt  catgactctg  gagagacctc  tgagatgcag  tagctgctgc  tttccctgct
721  gctccagga  gatagaaatc  caggctcctc  ctgggggtacc  agtaggttat  gtgactcaga
781  cctggcacc  atgtctgccc  aagttcactc  tccaaaatga  gaagaagcag  gatgtcctga
841  aagtagttg  tccgtgtgtt  gtgtgtagct  gctgttccga  cattgacttt  gagctcaaat
901  ctctagatga  agaatcagta  gttggcaaaa  tttctaagca  gtggtctggt  tttgtgagag
961  aggccttcac  ggatgcagac  aattttgga  tccagttccc  gctagacctg  gatgtgaaga
1021  tgaaagctgt  gatgcttggt  gcttgtttcc  tcatagattt  catgtttttt  gaaagaactg
1081  gaaacgagga  gcaaagatca  ggagcatggc  agtaactccc  tgagagttct  tgaggtttaa
1141  ggacgacaac  tttatggacc  ctgaatggaa  actgaggaat  cacaaggcac  acaccgtggc
1201  ttcttttct  ttactgaaat  aactttctat  caactcacct  gtgatgcctg  ggtgccctgt
1261  tgtacaatta  tgctcccaaa  ttagagttaa  ttttttagaa  ttctgtcatg  tatttgtttt
1321  tatacattct  taaggttttc  actgtgaatt  tgggaaaaca  gttatgtgaa  tttatataca
1381  tagaaatgat  cttctctatg  aaaacatact  ttgactttgt  ctttcgtttc  ccatttttgt
1441  ggaaacgtaa  atgctattgt  aatttaatat  aaaattacac  attaaatata  attatgattt
1501  ac

```

Predicted open reading frame:

```

MENHSKQTEAPHPGTYMPAGYPPPYPPAAFQGPSDHAAYPIPQAGYQGPPGYPGPQPGY
PVPPGGYAGGGPSGFPVQNQPAYNHPGGPGGTPWMPAPPPPLNCPGLEYLEAQIDQLLVH
QQIELLEVLTFETNNKYEIKNSLGQRVYFAVEDTDCCTRNCCGASRPFTLRILDNLGRE
VMTLERPLRSCSCCFPCCLQEIEIQAPPGVPVGYVTQTWHPCLPKFTLQNEKKQDVLKVV
GPCVVCSCSDIDFELKSLDEESVVGKISKQWSGFVREAFADNFGIQFPLDLVDVKMKA
VMLGACFLIDFMFFERTGNEEQRSGAWQ

```

FIGURE 5

## Mouse PLSCR2

```

1 tctaaagact caggaaacaa aacctaaatt gcctcaaagt tcaggtgctt tttctccctg
61 acttttagtct agtggagtag tgcagcacct atgcctttct gagaggagtc tggagagctg
121 agtcgctgct ggtgctagga ttctaggaat tcgcctcact tggagctgca tgagaaaaga
181 aaggcttgca aatggaggct cctcgctcag gaacatactt gccagctggg tatgccctc
241 agtatcctcc agcagcagtc caaggacctc cagagcatac tggacgcccc acattccaga
301 ctaactacca agttccccag tctggttatc caggacctca ggctagctac acagtctcaa
361 catctggaca tgaaggttat gctgctacac ggcttcctat tcaaaataat cagactatag
421 tccttgcaaa cactcagtgg atgccagcac caccacctat tctgaactgc ccacctgggc
481 tagaatactt aaatcagata gatcagcttc tgattcatca gcaagttgaa cttctagaag
541 tcttaacagg ctttgaaaca aataacaaat ttgaaatcaa gaacagcctc gggcagatgg
601 tttatgttgc agtgggaagat actgactgct gtactcgaaa ttgctgtgaa gcgtctagac
661 ctttcacctt aagaatcctg gatcatctgg gccaaagaagt catgactctg gagcgacctc
721 tgagatgcag tagctgctgc ttccctgctc gcctccagga gatagaaatc caggctcctc
781 cggggggtgcc aataggttat gtgactcaga cctggcaccc atgtctgcca aagctcactc
841 ttcagaacga caagagggag aatgttctaa aagtagttgg tccatgtgtt gcatgcacct
901 gctgttcaga tattgacttt gagatcaagt ctcttgatga agtgactaga attggttaaga
961 tcaccaagca gtggtctggg tgtgtgaaag aggccttcac ggattcggat aactttggga
1021 tccaattccc gctagacctg gaggtgaaga tgaaagctgt gacgcttggg gcttgcttcc
1081 tcatagatta catgtttttt gaaggctgtg agtaggaaca gaaatccgac ctgcagtagg
1141 aatcaatgaa agaggacaga gaagatctga agtctacaca aggagatcat atgattgaga
1201 gacctggggc tttttgattt cttcattgaa atttctcaga atcaagctgt tatacatgaa
1261 gcatagtatg taacattttg gttttcaaat ggtagtttat cttttacatt attggaatag
1321 acctggataa ttatctttat acacttctaa aaatatgcac caaattcaag ttaaaaaaaaa
1381 aaagacgaag agaagtgtat gttttaaaat aaacatttt atggaaaagt aagttaaadc
1441 ataactctggg atttattttt catcttttgt tcaatttaaa ccttgttagt gctgatttta
1501 ttataaaatt gtactttact atcaaacctt gttagtttat ttcttacaga aatcctccta
1561 ttattttgaa attacatatt tttgaaagct ttttaaaaga tactattgcc tgggaaattc
1621 ta

```

Predicted open reading frame:

```

MEAPRSGTYLPAGYAPQYPPAAVQGPPEHTGRPTFQTNVQVPQSGYPGPQASYTVSTSGH
EGYAATRLPIQNNQTIIVLANTQWMPAPPPILNCPPGLEYLNQIDQLLIHQQVELLEVLTG
FETNNKFEIKNSLQMVYVAVEDTDCCTRNCCEASRPFTLRILDHLGQEVMTLERPLRCS
SCCFPCCLQEIEIQAPPGVPIGYVTQTWHPCLPKLTLQNDKRENVLKVVGPCVACTCCSD
IDFEIKSLDEVTRIGKITKQWSGCVKEAFTSDNFGIQFPLDLEVKMKAVTLGACFLIDY
MFFEGCE

```

FIGURE 6

### Mouse PLSCR3

```

1  ccccgagtct taggtgccgc cctagagacc ctggggcccgt actggggcgca gctacctctt
61  cgccctctgcc tgtccgtctt tgtttctgtg tctgtctagc tgttcccgag ctgtccccac
121 tccagaacta agtctccctt acgccccaaag cccaagactc cctcctgat tcccatggca
181 ggctacttgc cccccaaagg ctatgccctt tcacccccac ctccctacce cgtgccatct
241 gggatatccag agccgggtggc tctgcatact ggaccgggac aagctccagt gccaccacag
301 gtgcctgccc ctgctcccgg cttegcctctc ttcccctcgc caggcccagt ggctccaggg
361 cctcctgctc ctttcgtgcc attgccaggg gtgcctcctg gcctcgaatt cctagtgcag
421 attgatcaaa tcttgattca tcagaaggct gaacgagtgg aaacgttcct aggtggggag
481 acctgtaata tgtatgaact tcgctccgga accggacagc aactgggtca ggcagctgaa
541 gagagcaact gttgtgcccg cctgtgctgt ggtgcccgcg gaccatttcg aatccgccta
601 gcggaccctg gggaccgcga ggtgctccgg ctctccgcg cacttcattg tggctgcagc
661 tgctgcccct gtggtcttca ggagatggaa gtccaggctc cacctggcac caccattggc
721 catgtgctac agacctggca tcccttcctt cctaagtttt ccacctcggg tgctgatcgc
781 caacctgttc tacgagttgt agggccttgc tggacttgtg gctgtggtac agacaccaac
841 tttgaggtga agactaagga tgaatcgcca agtgtggggc gcacagcaa gcagtgggga
901 gggctgctcc gagaagccct cacagatgcc gatgactttg gcctccaatt ccagtcgat
961 ctagatgtga aagtgaaggc cgtactgctg ggagccacgt tcctcatcga ttatatgttc
1021 ttcgagaaga gaggaggcgc aggaccctct gccatcacca gttagaagcc acctcaggat
1081 gaggagaccc atctccttga ccagaattta agatggtcag ctgccctgga cgttccctcc
1141 tgaagcaacc ctttccttga tatacactgc ggcggaccga cgagggtggc cgagtgggtg
1201 ggagccgttg tgtcccatcc ctccctgctt tctcctgtgg ccctgcagaa gagcatgtat
1261 gagacctgtt cctccttctg ttcaccatct ccaggcagtg cctgtgcaca cattagcttt
1321 taaacttctt tgcacactcc ttccagcctt cctctggggc ctctgcatag gcaggggcat
1381 ctggaatcct ggactcaagt tttaccccag ggcttgtggg taaaaggcaa gcagtaccaa
1441 agatggcaga caccaccctt cccttatggc actttagcca attagtttag cttccgattg
1501 tggcactctg aggggatcct tgccctcctc ctaatagctg tagcggttgg gccccagtg
1561 caactcccta agccctggg ccctgcgggt gctttctgca gcttctgtg cttatattaa
1621 ccgttaaccc ctctcttccc ctactgtagg aaggaggctg tgtctttgta tgttgtactc
1681 atataaactt tgaaactttt taaacagt

```

Predicted open reading frame:

```

MAGYLPPKGYAPSPPPYPVPSGYPEPVALHPGPGQAPVPTQVPAPAPGFALFSPGPVA
PGPPAPFVPLPGVPPGLEFLVQIDQLIHQKAERVETFLGWETCNMYELRSGTGQQLGQA
AEESNCCARLCCGARRPFRIRLADPGDREVLRLRLPLHCGCSCCPCGLQEMEVQAPPGTT
IGHVLQTWHPFLPKFSILDADRQPVLRVVGPCWTCGCGTDTNFEVKTKDESRSVGRISKQ
WGGLLREALTDADDFGLQFPVLDLVKVKAVLLGATFLIDYMFPEKRGAGPSAITS

```

FIGURE 7



# Mouse PLSCR4 (partial sequence)

```

1  cagatgactt taccaggaat gcctatcgga acctacgacc ctttgtgctc cgggtcactg
61  actgcctggg ccgagagatc atgaccatgc agaggccttt ccgatgcacc tgctgttgct
121 tctgctgccc ctgtgcaaga caagagctgg aagtgcaatg tcctcctggg gtcaccattg
181 gctttgttgc agaacactgg aacttgtgca gagcctctta tagcatccag aatgagaaga
241 aagagagtat gatgagagtg aggggtccgt gtgcaaccta cggctgtggc tccgattctg
301 tttttgagat caactctcta gatggcgtgt ctaacatcgg cagtattata aggaagtgga
361 atggcctttt atcaacgatg gtaaatgctg accactttga gattcgcttc cctttggccc
421 tggatgtgaa gatgaaagca atgattttcg gctcttgctt cctcattgac ttcattgtact
481 ttgaacgacc tcctccgcga cgtatgtcaa gatagaggat caaacaatc atcaattgaa
541 aaaaaatgag taatttgcac tcagcttatg tatagctttc tgttattagc acatatatctt
601 ctctggcttg acatgtgtct cagttgagta tttagcttct tgaggcacta gggtattctg
661 aaatctctac tccattagcc aaataaacat atacagatac aagcattaca gctataggca
721 tgtgagctat gggaaagtga aacccttggg tctcaacttg acaggtcaca acacatcttc
781 tgtncctgtc cctttcttct tcattaggaa aaacttgatt ccaggtgaga ggactgctac
841 tcttagtctt catcttttagg agccaaaaag tgcacagaaa taatgtgctt taatgtgctc
901 agaaaaatgtt ttgtgtgtgt gtgtgtgtct gtgtgcacca gaacatcatt ctgcaacatg
961 catacaagtt cctaaagtcc tcagtgggga attttatttt attacaaaat aaaatgtatt
1021 ctcttttatag gcagtttata ttttctatgc atatttcttc ataccctcaa ctgggcaatg
1081 tggagctacc tgtatatgaa ggtaggatga gggtagcagg gaaagttgat cagagctaca
1141 gccaaataag ttcttggcat cttacacatg ttgtgtgttt gcttactcag caaaattagt
1201 gtggactctc gtatttacac ttgcctttta tctaactgtt tatactgatg tctggaatta
1261 cctattgtat ttttgtatct cacttgctat tttttttttt ttcgaaatcc atctaattgac
1321 caggatgtcc ttgtgaccaa cagtttatta aagctgaata tgtaaatcct gtcattgctt
1381 taatactggt gacgctttgc gtggtaaaca actcattata tgcaatcagt aagaagacac
1441 agtaaatttg ttgcttccat attttctcca gattatcaat gaggactatg gaagaccagc
1501 agacttgtac taaggacagt gtatgtatga atcactgatt taattaatga gtttcatgcc
1561 tttgctgtcg acctacacat agatgctgta tgggtttttt ttttaatgga tatattctct
1621 tanagtttat ttaaaaagga ttaagtgtc ttgggttgaa ttatcctgag agaagagatg
1681 tagccaacag gcctttttga aatagcaggn gcttcagctt taattatact aatgttttta
1741 tgagaaagat tgttctctc agttatctac ttgctgctgt tgagttttta tttaaaaaaa
1801 atcatgagtt cttgactaaa aactacctta aatgttaaaa tgtacctcta attttaacca
1861 gacatacatg atttctgtat gacatcttgt attttgcata taaaccagat aaacagaatt
1921 ctgagagctc acgtataagc ctgtcctttg cccaccacac cccattctta gcactttgca
1981 tcacgttgat agtgaaagtc agaatgcttc atatttctgt gctccatact tcagtgttca
2041 tgatgctaat acttctctaa cagcagaatt ctttaacata agtcatgcaa tttctgtaac
2101 gcagtagaat ttcactgtat caagacagcc tacttaacta aaaaataaac aacttgtttt
2161 ct

```

Predicted open reading frame (partial, 5' end missing):

```

DDFTRNAYRNLRPFVLRVTDCLGREIMTMQRPFRCTCCCFCCPCARQELEVQCPPGVITIG
FVAEHWNLCRASYSIQNEKKESMMRVRGPCATYGGCGSDSVFEINSLDGVSNIGSIIRKWN
GFLSTMVNADHFEIRFPLALDVKMKAMIFGSCFLIDFMYFERPPPRMSR

```

FIGURE 8

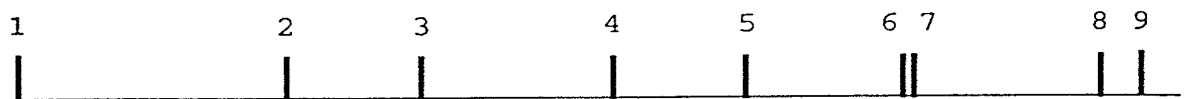
PLSCR1	1	.....MD	KQNSQMNASH	PETNLPVGY	PQY	PPTAFQG	PPGY	SGYPGP
PLSCR2	1	.....	.....	.....	.....	.....	.....	.....
PLSCR3	1	.....	.....MAGYL	BPBGYAPSH	PPY	PVT..PG	YPEPALHPG.	
PLSCR4	1	MSGVVPTAPE	QPAGEMENQT	KPPDPRPDAP	PEY	SSHFLPG	PPGTAVPPPT	
PLSCR1	43	QVSYPPPPAG	HSGPGFAGFP	VPN.....QP	VYNQP.VYNQ	PVGAAGVFWM		
PLSCR2	1	.....	.....	.....	.....	.....M		
PLSCR3	28	..PGQAPVPA	QVPAPAPGFA	LF.....	....PSPGPV	ALGSAA.PFL		
PLSCR4	51	GYPGGLPMGY	YSPQQPSTFP	LYQPVGGIHP	VRYQPGKYPM	PNQSVPTWM		
PLSCR1	87	PAPQPPLNCP	PGLEYLSQID	QILIHQQIEL	LEVLTGFETN	NKYEIKNSFG		
PLSCR2	2	PAPPPPLNCP	PGLEYLSQID	MILIHQQIEL	LEVLFSSFESS	NMYEIKNSFG		
PLSCR3	64	PLP....GVP	SGLEFLVQID	QILIHQKAER	VETFLGWETC	NRYELRSGAG		
PLSCR4	101	PGPTPMANCP	PGLEYLVQLD	NIHVLQHFP	LEMTCFETN	NRYDIKNNSD		
PLSCR1	137	QRVYFAAEDT	DCCTRNC CGP	SRPFTLRIID	NMGQEVITLE	RPLRCSSCC.		
PLSCR2	52	QRIYFAAEDT	NFCIRNCCGR	SRPFTLRITD	NVGREVITLE	RPLRCNCCC.		
PLSCR3	114	QPLGQAAEES	NCCARLCCGA	RRPLRVRLAD	PGDREVLRL	RPLHCGCSC.		
PLSCR4	151	QMVYVVTEDT	DDFTRNAYRT	LRPFVLRVTD	CMGREIMTMQ	RPFRCTCCCF		
PLSCR1	185	.CPCCLOEIE	IQAPPGVPIG	YVIQTWHPCL	PKFTIQNEKR	EDVLKISGPC		
PLSCR2	100	.CPCCLOEIE	IQAPPGVPVG	YVTQTWHPCL	TKFTIKNQKR	EDVLKISGPC		
PLSCR3	162	.CPCGLQEME	VQAPPGTTIG	HVLQTWHPFL	PKFSIQDADR	QTVLRVVGPC		
PLSCR4	201	CCPSARQELE	VQCPPGVTTIG	FVAEHWNLCR	AVYSIQNEKK	ENVMRVRGPC		
PLSCR1	235	VVCSCCGDVD	FEIKSLDEQC	VVGKISKHWT	GILREAFDA	DNFGIQFPLD		
PLSCR2	150	IVCSCIAGVD	FEITSLDEQI	VVGRISKHWS	GFLREAFDA	DNFGIQFPRD		
PLSCR3	212	WTCGCGTDTN	FEVKTRDES	SVGRISKQWG	GLVREALDA	DDFGLQFPLD		
PLSCR4	251	STYCGGSDSV	FEVKSIDGIS	NIGSIIRKWN	GLL.SAMADA	DHFDIHFPD		
PLSCR1	285	LDVKMKAVMI	GACFLIDFMF	FESTGSQEQK	SGVW	318		
PLSCR2	200	LDVKMKAVMI	GACFLIDYMF	FERTR.....	....	224		
PLSCR3	262	LDVRVKAVLL	GATFLIDYMF	FEKRGAGPS	AIT	295		
PLSCR4	301	LDVKMKAMIF	GACFLIDFMY	FERSEFORSR	....	330		

FIGURE 9

MU PLSCR1 328 aa; HU PLSCR1 318 aa

	10	20	30	40	50	60
Mouse	MENHSKQTEAPHPGTYMPAGYPPPYPPAA	FQGPSDHAAYPI	QAGYQGPPGPYPGPQPGY			
Human	MDKQNSQMNASHPETNLPVGYPPQYPP	PTAFQGP		P	GYSG	YPGPQVSY
	10	20	30			40
	70	80	90	100	110	
Mouse	PVPPGGYAGGGPSGFPVQNQPAYNH	PG	GP	GT	FWMPAPPPPLNCPPGLE	YLAQID
Human	PPPPAGHSGPGPAGFPVPNQPVYNQ	PVYNQPVGAAGVFWMPAPQFP	PLNCPPGLE	YLSQID		
	50	60	70	80	90	100
	120	130	140	150	160	170
Mouse	QLLVHQQIELLEVLTGFETNNKYEIK	NSLGQRVYFAVEDTDCCTR	NCCGASRPF	TLRILD		
Human	QILIHQQIELLEVLTGFETNNKYEIK	NSFGQRVYFAAEDTDCCTR	NCCGPSRPF	TLRIID		
	110	120	130	140	150	160
	180	190	200	210	220	230
Mouse	NLGREVMTLERPLRCSSCCFPCLQE	IEIQAPPGVPVGYVTQTWHPCL	PKFTLQNEKKQD			
Human	NMQGEVITLERPLRCSSCCCPCLQE	IEIQAPPGVPIGYVIQTWHPCL	PKFTIQNEKRED			
	170	180	190	200	210	220
	240	250	260	270	280	290
Mouse	VLKVVGPCVVCSCSDIDFELKSLDEE	SVVGKISKQWSGFVREAF	TADNFGIQFPLDL			
Human	VLKISGPCVVCSCCGDVFELKSLDEQ	CVVGKISKHWTGILREAF	TADNFGIQFPLDL			
	230	240	250	260	270	280
	300	310	320			
Mouse	VKMFAVMLGACFLIDFMFFERTQNEE	QRSGAWQ				
Human	VKMFAVMIGACFLIDFMFFESTGSEQ	SGVW				
	290	300	310			

FIGURE 10



0 kb

28 kb

cgagcgccagcgcggggaaccgggaaaaggaaaccgtgttggtgtacgtaagattcaggaaa  
 cgaaaccaggagccgcgggtgttggcgcaaagggttactcccagaccctttccgggtgac  
 ttctgagaagggttgccgcagcagctgtgcccagacagctctagaggcgagaaagaggaagcca  
 tcgcctggccccggctctctggaccttgtctcgctcgggagcggaacagcggcagccag

↓ Exon 2

↓ Exon 3

agaactgttttaatcatggacaaacaaaactcacagatgaatgcttctcaccgcggaaaca  
 M D K Q N S Q M N A S H P E T

↓ Exon 4

aacttgccagttgggtatcctcctcagtatccaccgacagcattccaaggacctccagga  
 N L P V G Y P P Q Y P P T A F Q G P P G

tatagtggctaccctgggccccaggtcagctacccacccccaccagccggccattcaggt  
 Y S G Y P G P Q V S Y P P P P A G H S G

cctggcccagctggctttcctgtcccaaatacagccagtggtataatcagccagtatataat  
 P G P A G F P V P N Q P V Y N Q P V Y N

cagccagttggagctgcaggggtaccatggatgccagcgccacagcctccattaaactgt  
 Q P V G A A G V P W M P A P Q P P L N C

↓ Exon 5

ccacctggattagaatatattaagtcagatagatcagatactgattcatcagcaaattgaa  
 P P G L E Y L S Q I D Q I L I H Q Q I E

↓ Exon 6

cttctggaagttttaacagggttttgaaactaataacaaatatgaaattaagaacagcttt  
 L L E V L T G F E T N N K Y E I K N S F

ggacagagggtttactttgcagcggaagatactgattgctgtaccgcgaatttgctgtggg  
 G Q R V Y F A A E D T D C C T R N C C G

ccatctagaccttttaccttgaggattattgataatatgggtcaagaagtcataactctg  
 P S R P F T L R I I D N M G Q E V I T L

↓ Exon 7

gagagaccactaagatgtagcagctgttggtgtccttgccttcaggagatagaaatc  
 E R P L R C S S C C C P C C L Q E I E I

caagctcctcctggtgtaccaatagggttatgttattcagacttggcacccatgtctacca  
 Q A P P G V P I G Y V I Q T W H P C L P

aagttttacaattcaaaatgagaaaagagaggatgtactaaaaataagtggtccatgtgtt  
 K F T I Q N E K R E D V L K I S G P C V

↓ Exon 8

gtgtgcagctgttggtggagatgttgattttgagattaaatctcttgatgaacagtgtgtg  
 V C S C C G D V D F E I K S L D E Q C V

gttggcaaaattttccaagcactggactggaattttgagagaggcatttacagacgctgat  
 V G K I S K H W T G I L R E A F T D A D

aactttggaatccagttcccttttagaccttgatgttaaaatgaaagctgtaattgattggg  
 N F G I Q F P L D L D V K M K A V M I G

↓ Exon 9

gcctgtttcctcattgacttcatgttttttgaaagcactggcagccaggaacaaaaatca  
 A C F L I D F M F F E S T G S Q E Q K S

ggagtgtggttag  
 G V W -

FIGURE 11

-150	AGTTTCCTCTCCTTAACCACCGGACAAACGTCTCTGGAGTCTCTCCAATG	-101
	CCAAT box	
-100	AGCAAGAAAGCAAGTCGGGGGTAGGGGAGGGGCCTCACACCAGGGGGTGG	-51
	GC box GC box	
-50	GCGCAGTCCCTCCTCCAGCTCCTTCACCCTCCAGTAGTCTCGTGGGTCCC	-1
	AP4 USF	
+1	CGAGCGCCAGCGCGGGAACCGGAAAAGGAAACCGTGTTGTGTACGTAAG	+50
	AP4 ETS1 ISRE; IRF	
+51	ATTCAGGAAA	

FIGURE 12

HuPLSCR1	1	-----MDKQNSQMNASHPETNLFVGYPPQYPPHTAQGPPGYSGYEGP
HuPLSCR2	1	-----
HuPLSCR3	1	-----MAGYLPKQYAPSPPPPYVTPGYP-----EP
HuPLSCR4	1	MSGVVPTAPEQPAGEMENQTKPPDPREDAPPEYSSHFLEGPPGTAVPEPT
HuPLSCR1	43	QVSYPPPPAGHSGPGPAGFPVPNQPVYNQPVYNQPV-----GAGMPMM
HuPLSCR2	1	-----
HuPLSCR3	28	-----ALHPGPGQAPVPAQVPAAPAPGFALEPSP-----GPVALGSA
HuPLSCR4	51	GYPGGLPMGYYSPPQPSPTFPLQYQVGGIHVVRQPGKYPMPNQSVPTTMM
HuPLSCR1	87	PAPQPLNCPPGLEYLSQIDQILHQIIELEVLGTGFETNNKYEIKNSFG
HuPLSCR2	2	PAPPPPLNCPPGLEYLSQIDMILHQIIELEVLGFSFSSNNMYEIKNSFG
HuPLSCR3	64	APFLPLPGVPSGLEELVQIDQILHQIIELEVLGFWETCNRYEERSGAG
HuPLSCR4	101	PGETPMANCPPGLEYLVQIDNTHVLQHFEPLEMMTCFEETNNRYDIKNNSD
HuPLSCR1	137	QRVYFAAEDTDCCTRNCCGPPSRPFTLRILDNWQQEVTLERPLRCS--
HuPLSCR2	52	QRIYFAAEDTNECIRNCCGRSPFTLRITDNVGREVTLERPLRNC--
HuPLSCR3	114	QPLQAAEESNCCARLCCGARRPLRVRLADPGDREVLRLLRPLECGCS--
HuPLSCR4	151	QMYYVVTEDEDDFTRNAYRTLRFVLRVTDGCMGREITMTQRPFRCTCCCF
HuPLSCR1	185	CCPCCLQEIETQAPPGVPIGYVITQWHPCLPKFTIONEKREDVLKISGPC
HuPLSCR2	100	CCPCCLQEIETQAPPGVPGVVTQWHPCLTKEFTIKNQKREDVLKISGPC
HuPLSCR3	162	CCPCCLQEMEVQAPPGETTIGHVLQWHPELPKESIQDADRQTVLRVVGPC
HuPLSCR4	201	CCPSARQELEVQCPPGVTIGFVAEHNWNLCAVYSIQNEKKENVMRVRGPC
HuPLSCR1	235	VVCSCCGDVDFEIKSLDEQCVVGKISKHWTCGLLREAFDADNFGIQFPD
HuPLSCR2	150	IVCSCLAGVDFEITSLEQIVVGRISKHWSGELREAFDADNFGIQFPD
HuPLSCR3	212	WTCGCGTDNFEVKTRDESRSVGRISKQWGLVREALTDADDFGLQFPD
HuPLSCR4	251	STYCGGSDSVFEVKSLDGISNIGSIIRKWNGLL-SAMADADHFDIHFPD
HuPLSCR1	285	LDVKMKAVMIGACFLIDFMFFESTGSGEQKSGVW
HuPLSCR2	200	LDVKMKAVMIGACFLIDYMPFFETR-----
HuPLSCR3	262	LDVRVKAVLLGATFLIDYMPFEKRGAGPSAITS
HuPLSCR4	300	LDVKMKAMIFGACFLIDFMFFERSPPQRRS----

FIGURE 13